# ABSTRACT OF THE DISCLOSURE

A method of and device for simulation which represents variations in electrical characteristics (Idsat, Vth and the like) of a device constituting a semiconductor integrated circuit in the form of a corner model including corners defining the limits of the variations is provided. A circuit simulation is performed to determine device parameter sensitivities which are the derivatives of the electrical characteristics with respect to device parameters such as $\Delta L$, $\Delta W$, Tox and Vth0. Variations in the device parameters at each corner are determined by applying the device parameter sensitivities and the values of the electrical characteristics required for each corner to the normal equation of the linear least squares method. The method and device can determine the values of a set of device parameters at each corner without the need to repeat the circuit simulation and can uniquely determine the values of the set of device parameters.